

PATENT COOPERATION TREATY

Rec'd PCT/PTO 10 DEC 2004

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

YOU ME PATENT & LAW FIRM
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Date of mailing 25 August 2004 (25.08.2004)
(day/month/year)

Applicant's or agent's file reference
OPP031015KR

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/KR 2004/000521

International filing date (day/month/year)
12 March 2004 (12.03.2004)

Priority Date (day/month/year)
10 April 2003 (10.04.2003)

International Patent Classification (IPC) or both national classification and IPC
H04B 17/00, H04Q 7/34

Applicant

KTFREETEL CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Cont. No. I Basis of the opinion
- ☐ Cont. No. II Priority
- ☐ Cont. No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Cont. No. IV Lack of unity of invention
- ☒ Cont. No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☒ Cont. No. VI Certain documents cited
- ☒ Cont. No. VII Certain defects in the international application
- ☒ Cont. No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

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Continuation No. I

Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed.

Continuation No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-14	YES
	Claims ----	NO
Inventive step (IS)	Claims 1-14	YES
	Claims ----	NO
Industrial applicability (IA)	Claims 1-14	YES
	Claims ----	NO

2. Citations and explanations:

The following documents are referred to:

D1: US 2003/0179730 A1

D2: WO 2001/026239 A1

D3: GB 2 272 604 A

Document D1, which is a member of the same patent family of prior art document KR 2002068965 A, discloses a method for measuring receive sensitivity of a base station for a plurality of frequency assignments with only one test terminal. The test terminal is connected to the high frequency radio end part of a base station through a directional coupler and cables.

Document D2 relates also to a method of measuring sensitivity of the receiving end in a transceiver. This known method is characterized by connecting a signal along a transmission path in the transceiver from the transmitting end of the transceiver to the receiving end of said transceiver, adding a noise signal to the signal to be transmitted from the transmitting end to

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the receiving end to form a sum signal and taking into account the influence of the transfer on the signal transmitted from the transmitting end to the receiving end, transferring the sum signal entering the receiving end through the receiving end, comparing the signal transmitted from the transmitting end with the sum signal that has passed through the receiving end and determining sensitivity of the receiving end on the basis of the comparison.

Both prior art documents D1 and D2 disclose methods for measuring the sensitivity of the receiving end in a radio base station. However, they are not directly related to the special case of measuring a receive sensitivity of a communication system having a transmit and receive path and a receive-only path, like a base station employing space diversity by means of one transmit and receive antenna and an additional receive antenna.

Document D3 discloses a radio base station comprising at least a pair of diversity receivers and a base station diagnostic subsystem for testing in order to provide some mechanism for testing that a receiver having diversity capability is fully functional.

Although, the configuration of the base station and the diagnostic subsystem as shown in Fig. 5 employs similar means to couple and combine the radio signals from the transmit and receive path and the receive-only path, it is neither disclosed nor suggested in combination with any one of the cited documents D1 and D2 to apply this known configuration for the purpose of measuring the receive sensitivities of the transmit and receive path and the receive-only path, according to the special technical features of independent claim 1 and the corresponding method according to the subject-matter of independent claim 10.

It is therefore considered, that the subject-matter of independent claims 1 and 10 is new and inventive as well.

The additional features introduced in dependent claims 2-9 and 11-14, describing further preferred realisations, are inventive by virtue of dependency.

Therefore the subject matter of all claims 1-14 is novel. The claimed invention is also considered to involve an inventive step and there is no reason to doubt its industrial applicability.

Continuation No. VI:

Certain documents cited

Continuation No. VII:

Certain defects in the international application

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The following defects in the form or contents of the international application have been noted:
Pursuant to PCT Rule 5.1(a)(ii), the description should cite documents D1 to D3 and should outline a brief summary of the relevant contents.

In order to meet the requirement of PCT Rule 6.3(b), whenever appropriate, each independent claim should be clearly delimited in relation to the closest prior art (for example, D1) using the two part form.

The features of all the claims should be followed by reference signs in parentheses (PCT Rule 6.2(b)). _____

Continuation No. VIII:

Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

In line 15 on page 2 of the description the abbreviation EQP is designated by the term "Equivalence Point Titration". The meaning of said term should be clarified as said term does not appear to make any sense in relation with the port of a coupler.

The applicant is kindly informed, that, occasionally, throughout the description and the claims some words appearing at the end of a line are truncated and wrapped over to the beginning of the following line, see for instance the last word in the description on page 5, line 47 or the last word in the third line of claim 9. _____